cerebellum to the pons, which are distinguished from one another by the fact that they develop in the fœtus at different periods.

1. The cerebral system arises chiefly from the cortex of the posterior lateral and basal parts of the hemisphere, only a few of its fibres coming from the superior parts. It lies in the lateral part of the peduncle, and passes in a diagonal direction from behind forward. It ends in the gray masses of the upper half of the pons, being joined with masses in both lateral portions, the majority of its fibres crossing the median line. From these gray masses new fibres arise, which go upward in the pes of the crus to the cerebrum. Some of these fibres go to the frontal lobes, others to the temporo-occipital lobes, while a few end in the corpora striata.

2. The spinal system arises from the cortex of the superior part of the hemisphere, and in part from the vermiform lobe. It lies beneath the cerebral system in the middle peduncle, and passes diagonally from before backwards, only the most caudad part appearing on the surface of the pons. It ends in the gray masses of both sides of the pons. From these gray masses numerous fibres arise which pass dorsad in the raphé between the lemnisci to the formatio reticularis, where they end by turning laterad into a mass of nerve cells recently discovered by Prof. Flechsig and named by him nucleus reticularis tegmenti pontis. These nuclei lie in the middle third of the pons, between the lemniscus and the posterior longitudinal fasciculus, in the formatio reticularis, on each side of the raphé. The ganglion cells of this nucleus resemble those of the gray masses of the pons, but are larger and are embedded in a thick network of fine fibres. Inasmuch as the formatio reticularis caudad of this nucleus contains many more longitudinal fibres than it does cephalad of the nucleus, and as many of these fibres can be traced (?) into the anterior and antero-lateral columns of the spinal cord, Bechterew considers that the nucleus reticularis has a connection with the cord, and that the system of fibres which terminate in it join the cerebellum with the motor portions of the cord. It is the spinal system of fibres in the middle peduncle which first obtains its medullary sheath—at a time when the pyramidal tracts are the only ones possessing a sheath. He considers this system as a centrifugal tract from the cerebellum to the cord in which co-ordinating impulses may pass to the motor centres.—*Neurolog. Centralbl.*, March 15, 1885.

In advancing this view of the function of the tract, Bechterew seems to overlook the view now generally adopted, that the cerebellum governs co-ordination, not by sending impulses outward to the muscles, but by being the organ in which space relations are received from various sensory organs, and whence they are transmitted to the cerebral centres of motion, in which the true co-ordination takes place.

THE ORIGIN OF THE SPINAL ACCESSORY NERVE.—Numerous authorities have described a double origin to the XI. nerve, distinguishing a spinal portion which arises from a long group of cells in the lateral projection of the anterior cornua, and a medullary portion whose cells are not separable from the cells of the vagus nucleus. Darkschewitsch claims that the nerve arises from a continuous column of cells lying laterad and dorsad from the median group of the anterior cornua and preserving the same relation to the hypoglossal nucleus in the medulla. This column extends from the fifth cervical segment upward to the lower vagus nucleus at the lower third of the olivary body. The accessorius nucleus has therefore no connection with the upper or lower vagus nucleus, nor with the solitary fasciculus, as was claimed by Stieda. The roots of the nerve pass from the nucleus laterad, making a sharp curve in their course to the surface. The concave side of the curve is directed ventrad and laterad.—*Neurolog. Centralbl.*, March 15th.

THE POSTERIOR COMMISSURE OF THE BRAIN.—Spitzka has destroyed the entire left thalamo-crural region in a cat and observed the subsequent atrophy. He describes the following changes: The posterior commissure was reduced to half its normal size. The fibres from the left thalamus to the commissure were absent. The fibres from the commissure to the right half of the tegmentum were absent. There was present on the left side a distinct field under the posterior longitudinal fasciculus, close to the raphé, which was continuous with the posterior commissural fibres. This field was atrophied on the right side. There was an atrophy of the reticular field on the left side, lying between the posterior longitudinal fasciculus and the descending trigeminus root. There was atrophy of the right nucleus of Burdach.

He concludes that the thalamus is connected with the fundamental strand of the anterior column of the oblongata by means of the internal fibres of the reticular field—which cross in the posterior commissure,—and that the thalamus or subthalamic region is connected with the nucleus of Burdach by means of fibres which pass in the middle part of the reticular field, and decussate in the medulla. The first tract Spitzka names the thalamo-tegmental tract. It decussates in the posterior commissure. This experiment confirms the conclusion of Meynert, that each thalamus is connected with both reticular fields of the tegmentum by two great strands, one direct and one crossed.—*Alienist and Neurologist*, April, 1885; *Boston Med. and Surg. Jour.*, April, 1885.

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b.—PHYSIOLOGY OF THE NERVOUS SYSTEM.

A HEAT-CENTRE IN THE CEREBRUM.—Herr Aronsohn and J. Sachs have made a series of experiments upon this subject on rabbits and dogs. The experiments were made upon the brain of rabbits with a needle, and the rectal temperature noted. After